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(54) **Flying punching machine for extruded section bars**

(57) A stepless punching machine for extruded section bars, preferably for roller shutters comprises essentially: moving means (10) of punching means (20) for the section bars including at least a vertical moving punch (21) fit for punching slots in at least one of said section bar; shifting means (30) of the punching means (20), underlying this latter, and fit to realize a stop for said at least one section bar in correspondence of a punching condition of said section bar in which said punching means (20) punch each said section bar keeping a defined pitch; indexer means (40) to which are connected kinematically in input said moving means (10) for driving the motion and in output are connected driving means (50) fit to drive said shifting means (30) at the same moving direction and at a relative speed almost equal to zero as that of the forward moving section bars in correspondence of said punching condition and with contrary direction in correspondence of a not punching condition of said machine (1) in which said section bars move forward through this latter without being punched.

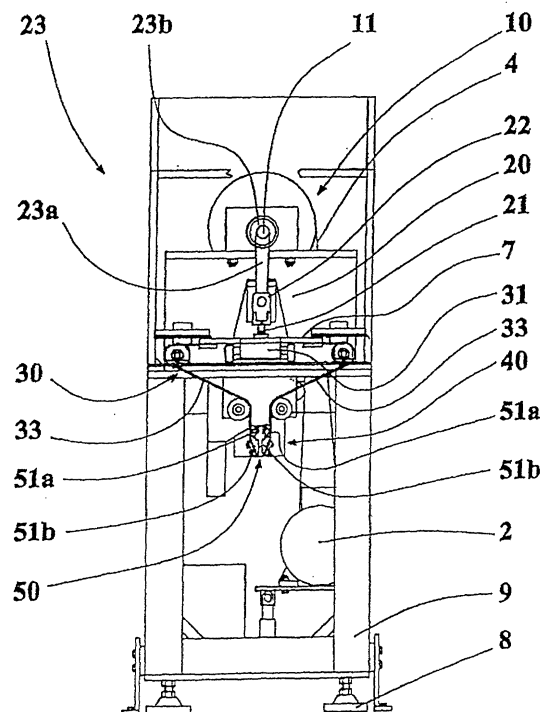


FIG. 2

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EUROPEAN SEARCH REPORT

Application Number
EP 00 10 9867

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	US 3 322 011 A (KOCIAN GEORGE J) 30 May 1967 (1967-05-30) * column 3, line 61 - column 6, line 60; figure 1 *	1	B21D28/24 B21D43/02
A	DE 823 284 C (CHARLES JOSEPH RHODES) 3 December 1951 (1951-12-03) * figures 1,7,9 *	1	
A	US 5 199 339 A (CREECH CLYDE W) 6 April 1993 (1993-04-06) * figures 1,2 *	1	
A	US 3 892 154 A (DUFFY MARCUS L) 1 July 1975 (1975-07-01) * figure 1 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B21D B26D
Place of search MUNICH		Date of completion of the search 23 May 2002	Examiner Vinci, V
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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23-05-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 3322011	A	30-05-1967	NONE	
DE 823284	C	03-12-1951	NONE	
US 5199339	A	06-04-1993	NONE	
US 3892154	A	01-07-1975	NONE	

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